

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

SOME RECORDS AND DESCRIPTIONS OF
AMERICAN DIPLOPODS.

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The millipeds here recorded, unless otherwise stated in connection with the notes on the species concerned, were collected by Stanley and Dorothea Mulaik, mostly during the summer of 1941. All specimens, including the types, are at present retained in the author's collection at the University of Utah.

POLYXENIDAE.

Polyxenus fasciculatus Say.

Locality.—Texas: Val Verde County, Lantry, June 3, 1941. One specimen referred to this species.

SPHAEROTRICHOPIDAE.

Scytonotus amandus Chamberlin.

Locality.—Idaho: 7 miles north of Georgetown, August 23, 1941. Numerous males and females. The species was previously known from the Canyons of Salt Lake and Utah Counties in Utah.

XYSTODESMIDAE.

Rhysodesmus texicolens (Chamberlin).

Aporiaria texicolens Chamberlin, Proc. Biol. Soc. Wash., 1938, vol. 51, p. 207.

Localities.—Texas: Hidalgo County, Edinburg, June 7, 1941, one male, and San Juan, June 5, one female.

Genus **BORARIA**, new.

Further study of the species described by the author as *Aporiaria texicolens* indicates that this form belongs undoubtedly to the dominant Mexican and Central American genus *Rhysodesmus*. Since *texicolens* was named as the type of *Aporiaria*, the group of other North American species described under that genus is left without a generic name. For

it the name *Boraria* is here proposed, the character most readily distinguishing the group it designated being the apically slender non-furcate or non-toothed telopodite of the male gonopod.

Genotype.—*Boraria carolina* (Chamberlin).

Sigmoria houstoni, new species.

Fig. 1.

In the preserved type, in which the colors probably have somewhat faded, the keels are a slightly orange yellow and the posterior border of metazonite a somewhat lighter yellow; the remaining portion of metazonite and posterior portion of prozonite brown, the brown area being lighter posteriorly; anterior portion of prozonite yellow. Antennae yellowish brown, the color darker distally. Legs yellow.

Quite distinct from related forms, such as *S. conclusa*, in the form of the gonopods of the male, especially in the details of the distal end of the telopodite and the lamellate basal spur. (See fig. 1).

Length of male holotype, about 39 mm.; width, 8.8 mm.

Locality.—Texas: Harris County, Houston, September-December, 1941, male holotype and female allotype, Russell Scott, collector.

Nannaria ursa Chamberlin.

Figs. 2 and 3.

Localities.—New Mexico: North of Glencoe, May 31, 1941, many specimens; south of Fort Stanton, same date, about a dozen specimens; and west of Ruidosa, June 1, five specimens.

Originally described from Bear Canyon (Camp Mary White) in the same state.

CONOTYLIDAE.

Conotyla coloradensis Chamberlin.

Localities.—Colorado: Douglas County, 20 miles southwest of Sedalia, August 6, 1941, two specimens; Larimer County, 7 miles west of Home, el. 8500 feet, August 7, 1941, six females; Jackson County, Cameron Pass, el. 10,000 feet, August 8, 1941, one male.

New Mexico: West of Ruidosa Junction, June 1, 1941, two specimens probably this species.

Wyoming: Woods Landing, el. 8000 feet, August 8, 1941, a male and female.

Conotyla deseretae Chamberlin.

Localities.—Utah: Salt Lake County, Mill Creek Canyon, March 15, 1943, ten specimens of both sexes; Utah County, American Fork Canyon, above Aspen Grove, one female.

RHISCOSOMIDIDAE.

Tingupa utahensis Chamberlin.

Locality.—Utah: Salt Lake County, Mill Creek Canyon, March 15, 1943, two females. The species was originally described from this same canyon.

LYSIOPETALIDAE.

Spirostrephon lactarium (Say)

Locality.—Texas: Harris County, Houston, September-December, 1941, several specimens, male and female, taken by Russell Scott.

This species seems to be much less common in Texas than *S. texense*.

NEMASOMIDAE.

Nopoiulus minutus (Brandt).

Localities.—Utah: Salt Lake City, April, 1942, numerous specimens.
Wyoming: Natrona County, Casper, August 10, 1941, one specimen.

Genus, *UTOIULUS*, new.

Gonopods of male elongate. Coxal piece of anterior pair of gonopods much exceeding the telopodite; sternite short; each provided with a long flagellum. Posterior gonopods with coxal division excavated on mesal side and telopodite channelled for reception of flagellum. First legs of male 6-jointed, thickened and without inner processes; second legs not obviously modified. Sternites free.

Genotype.—*Utoiulus utus* (Chamberlin).

Differing from *Nemasoma*, etc., in having the telopodite of posterior gonopods channelled for reception of flagellum, and in lacking processes from tibia or tarsus of first legs in the male.

Utoiulus utus (Chamberlin).

Nemasoma uta Chamberlin, Fig. 4 and 5 Ann. Ent. Soc. America, 5, 1912. p. 162.

Nec *Nannolene uta* Chamberlin, Pan-Pacific Ent., 2, 1925, p. 61.

General color brown, with repugnatorial glands showing as a series of black spots along each side, below which the sides are commonly paler than above. Antennae brown, the legs commonly paler.

Antennae conspicuously clavate. Eyes well developed with ocelli in 4 or 5 series; e.g., 7, 6, 4, 3.

Collum angularly narrowed down each side, with anterior margin of wing a little concave and the posterior convex.

Ordinary segments of body constricted about middle, giving the body a somewhat moniliform appearance; smooth above and striate below on each side.

Last tergite ecaudate, exceeded a little by the anal valves.

Gonopods of male as described for genus and illustrated in fig. 4.

First legs of male as shown in Fig. 5.

Number of segments, up to 48.

Length, to 12 mm.

Locality.—Utah: Mill Creek Canyon, March 15, 1943, numerous specimens.

PARAIULIDAE.

Aniulus oreines Chamberlin.

Utah: Salt Lake County, Mill Creek Canyon, March 15, 1943. Many specimens of both sexes.

Previously known from Colorado, near Glenwood.

Oriulus medianus Chamberlin.

Localities.—Montana: Three Forks, one male taken August 17, 1941; 6 miles west of Belgrade, August 17, 1941, several specimens of both sexes.

Wyoming: Fremont County, Brooks Lake Falls, August 12, 1941, four specimens, both sexes; Madison Junction, August 15, several; Teton County, Leeks Camp, August 13, three, and Turpin Meadows, August 13, many specimens.

Colorado: Douglas County, 20 miles southwest of Sedalia, August 6, 1941, several specimens, both sexes; Lorimer County, Rustic, August 7, 1941, many specimens, both sexes. Jackson County, Cameron Pass, 10,000 feet elevation, August 8, 1941, about a dozen specimens, both sexes.

New Mexico: Escabosa, May 30, 1941, one male.

Caliulus montanae Chamberlin.

Localities.—Montana: Brown, el. 5060 feet., August 19, 1941, numerous specimens of both sexes.

Idaho: Humphrey, August 20, 1941, many specimens of both sexes.

Ziniulus navajo, new species.

Fig. 6.

Distinguished from the two previously known species, both of which occur in Texas, in smaller size and conspicuously in the details of the posterior gonopods, one of the accessory branches of which forms a support or partial sheath for the slender principal or seminiferous blade. (See further fig. 6). Anterior gonopods as shown in fig. 00.

Body with a median dorsal black line on each side of which there is a longer posterior transverse white or yellow-white line uncate at outer end and a shorter anterior one; a black spot found on each side of each segment by the repugnatorial gland with adjacent to and mostly below this a light area which may be divided into two or more spots toward legs on each segment a large, subelliptic, light spot; elsewhere the surface is brown to brownish black. Last tergite and anal valves dark, sometimes nearly solid black. Antennae dark brown to black, the legs mostly light yellow or in part dusky.

Cardo of mandibles in male with caudal distal corner moderately produced.

Last tergite ecaudate.

Number of segments, 50-53.

Diameter up to 1.4 mm., as against 2 and 2.3 mm. in *aethes* and *medicolens* respectively.

Locality.—New Mexico; Mountainair, 6 miles south, May 31, 1941, three adult males and a female; 5 miles south of Tijeras, May 30, three females; south of Fort Stanton, May 31, three females; north of Glencoe, May 31, one female and two young.

JULIDAE.

Diploiulus luscus (Meinert).

Localities.—Utah: Salt Lake City, April and May, 1942, common in the city proper.

Wyoming: Notrona County, Casper, August 10, 1941, many specimens.

Diploiulus londinensis caeruleocinctus (Wood).

Localities.—Utah: Salt Lake City, Univ. of Utah, campus, March 25, 1942, two specimens, and several specimens in April and November, 1942.

Brachyiulus pusillus (Leach).

Locality.—Utah: Salt Lake City, April, 1942, many specimens.

SPIROBOLIDA.

Eurelus proximus Chamberlin.

Locality.—Texas: Hidalgo County, 6 miles east of Edinburg, June 5, 1941. One female. This is near the type locality for the species.

Eurelus kerrensis Chamberlin.

Locality.—Texas: Kerr County, Raven Ranch, July 10, 1941. One male. The type locality for the species.

Eurelus mulaiki, new species.

Figs. 7–11.

A species much resembling in general appearance *E. kerrensis* and other known species of the genus. The color of the body varies from olive brown to olive gray and nearly black when in full color, with a band of deeper color about the caudal borders of the segments. Legs also dark, deep chocolate or black when in full color.

Readily distinguished from *E. kerrensis*, *E. proximus* and *E. soleatus* in not having the claws of fourth to seventh pairs notably reduced, and the claws of the first pairs but little reduced.

Also distinct from other species in the form of the coxal processes of the third legs in the male, these being narrower, more sclerotized and curved as shown in fig. 9; these processes extend over the bases of the next two pairs of legs. The processes of fourth and fifth coxae thin and lammellar and of form shown in fig. 10 and 11. Processes of sixth and seventh coxae erect and relatively thick and low.

The anterior and posterior gonopods are as represented in figs. 0 and o. Number of segments, 47-49.

Length, up to about 50 mm.; width, to 6 mm.

Localities.—New Mexico; North of Glencoe (type locality), May 31, 1941, about a dozen specimens of both sexes; Ft. Stanton, May 31, five specimens; 6 miles south of Mountainair, May 31, twelve specimens; Tijeras, May 30, about fifteen specimens.

***Spirobolus scotti*, new species.**

Figs. 12-14.

Color dark brown to blackish with a chestnut or reddish band about caudal border of each segment which reaches forward nearly to the posterior sulci; collum with anterior and posterior borders reddish. Legs reddish.

Principal sulcus sharply impressed across dorsum, angled at level of pore, the caudal margin of which lies in contact with the angle; secondary or anterior sulcus also distinct throughout. Surface of segments marked densely with punctae and fine, short, impressed lines.

Second tergite produced ventrad into a subacutely pointed process extending well below level of collum.

The third legs in male with coxal processes lamellate, the distal margin oblique, forming with the mesal margin an acute mesodistal angle. (Fig. 14). Processes of fourth, fifth and sixth coxae similar but progressively smaller, less compressed and distally more rounded; processes of seventh coxae low and blunt.

Anterior gonopods (Coleopods) and posterior gonopods as drawn (Figs. 12 and 13).

Number of segments, typically 55-57.

Diameter, to 7 mm.

Locality.—Texas: Harris County, Houston, September-December, 1941, A male and three females (Russell Scott).

This species differs from *S. oklahomae* as well as from the larger *S. marginatus* in the form of the processes of the coxae of the third legs in the male as well as in the details of the gonopods.

SPIROSTREPTIDAE.

***Orthoporus flavior* Chamberlin.**

Locality.—Texas: Terrell County, 10 miles east of Dryden, June 3, 1941, one adult female 8.8 mm. in diameter; Hudspeth County, Sierra Blanca, June 2, one partly grown; Brewster County, Marathon, June 2 one small female.

The holotype is a not fully mature male taken 4 miles east of Dryden in September of 1939.

***Orthoporus texicolens* Chamberlin.**

Locality.—Hidalgo County, Edinburg, June 4, 1941. Four partly grown specimens of this species, the holotype of which was from the same place.

Also in same County at Donna, July 8, 1941, a male and female of smaller than usual size, collected by Holdane Bell; Bexar County, 5 miles south of Helotes, June 23, 1941, two females, probably this species.

***Orthoporus vallicolens*, new species.**

Differing obviously from *O. texicolens* and *O. flavior*, previously recorded Texas species, in coloration. The ordinary segments are brown with a chocolate colored band about caudal portion of metazonite which in most cases does not extend forward to the segmental sulcus. Collum, last tergite and anal valves brown. Legs chocolate colored.

Also distinguishable from the species mentioned in the form of the wing of collum and the usual number and form of its striae as represented in fig. 15. Segmental sulcus smooth, deeply impressed throughout, widely curved opposite the pore from which it is well removed.

Number of segments, 70–73.

Length, 100–110 mm.; width, to 9 mm.

Localities.—Hudspeth County, Ft. Hancock, June 1, 1941, numerous specimens the males among which are not fully mature; Val Verde County, Lantry, June 3, 1941, eight females. The collectors state that these millipeds were excessively abundant after heavy recent rains and occurred on and beneath bushes which they had ascended.

EXPLANATION OF FIGURES.

Fig. 1. *Sigmoria houstoni*, n. sp. Right gonopod of male, caudal view.

Fig. 2. *Nannaria ursa* Chamberlin (Specimen from Ruidosa). Left gonopod of male, caudal view.

Fig. 3. The same. (Specimen from Glencoe).

Fig. 4. *Utoiulus utus* (Chamberlin). Anterior gonopods, anterior view.

Fig. 5. The same. First right leg of male, caudal view.

Fig. 6. *Ziniulus navajo*, n. sp. Distal portion of left posterior gonopod.

Fig. 7. *Eurelus mulaiki*, n. sp. Anterior gonopods, anterior view.

Fig. 8. The same. Right posterior gonopod, caudal view.

Fig. 9. The same. Coxal process of third left leg of male, ventral view.

Fig. 10. The same. Basal joints of fourth left leg of male, showing coxal apophysis.

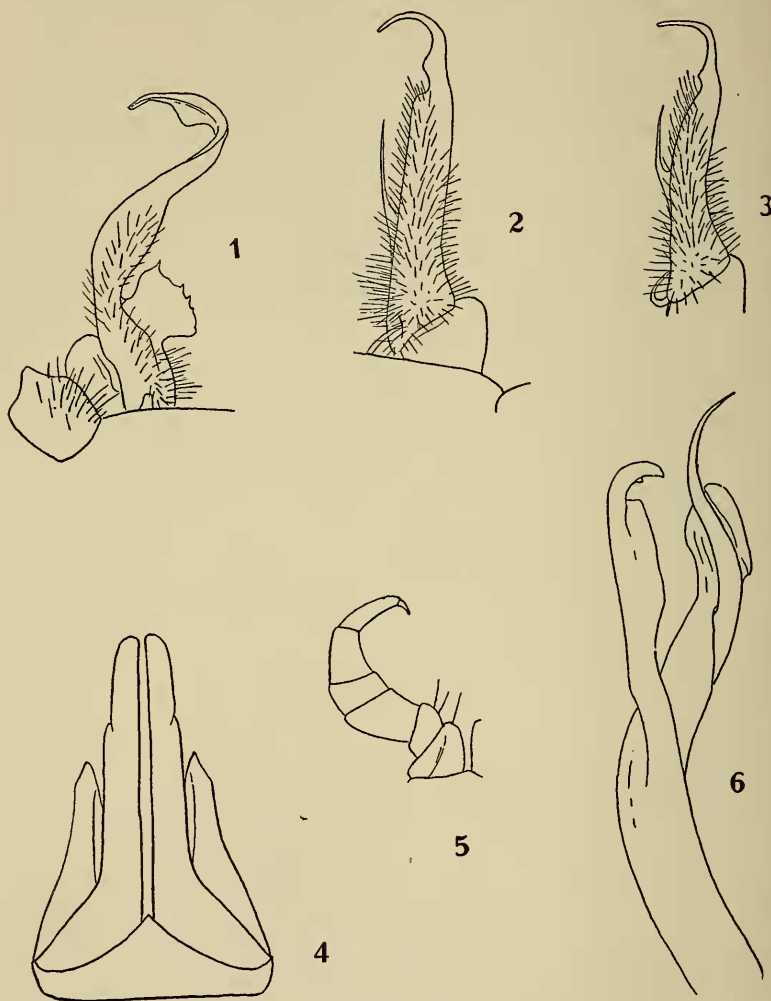
Fig. 11. The same. Coxa of fifth left leg of male.

Fig. 12. *Spirobolus scotti*, n. sp. Anterior sternal plate and right anterior gonopod of male, anterior view.

Fig. 13. The same. Left posterior gonopod of male, antero-mesal aspect.

Fig. 14. The same. Two basal articles of left third leg of male, anterior view, showing form of coxas process.

Fig. 15. *Orthoporus vallicolens*, n. sp. Lower part of right side of collum, lateral view.





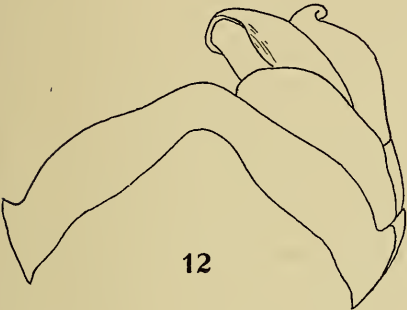
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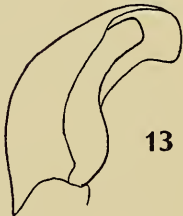
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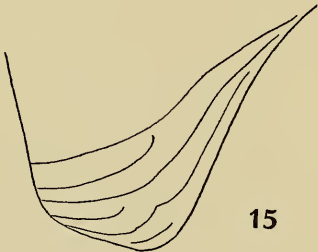
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